

APPLICATION
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TITLE: CAMOUFLAGE SELF-ADHERENT WRAP

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Camouflage Self-Adherent Wrap

CROSS REFERENCE TO RELATED APPLICATIONS

This application claims priority under 35 U.S.C. §119(e) of U.S. Application No. 60/502,816, filed September 12, 2003.

TECHNICAL FIELD

5 This invention relates to a camouflage item, and more particularly to a camouflage self-adherent wrap.

BACKGROUND

10 The purpose of camouflage is to help an object blend into the environment. Camouflage works because it creates visual confusion. Camouflage does not make an object or an individual invisible; it simply disguises the recognizable form by breaking up the outline. This visual confusion is created by both shape and color in the camouflage. The overall camouflage pattern consists of contrasting areas of different hues and shapes. Even for animals without acute color vision such as deer and elk, the irregular pattern of different shades and shapes breaks up the outline of an object or individual. The use of natural earth-tone colors produces a camouflage pattern that is effective for color-seeing animals such as wild turkeys without any loss of camouflage effectiveness for deer or elk. Counter-shading technology increases both shape and color contrast that enhances the effect of the camouflage by producing a three-dimensional effect and creating a third element of visual confusion.

SUMMARY

20 The present invention provides a camouflage self-adherent wrap. The present invention also provides methods of making a camouflage self-adherent wrap of the invention as well as methods of using such a camouflage self-adherent wrap.

25 In one aspect, the invention provides a wrap that includes a camouflage pattern applied thereon. According to the invention, the wrap is a self-adherent wrap. It is a feature of the camouflage self-adherent wrap that the wrap does not adhere to the object to which it is applied. Therefore, a camouflage self-adherent wrap of the invention is reusable.

The camouflage pattern can be applied to the wrap prior to the wrap being applied to an object or after the wrap has been applied to an object. The camouflage pattern can be applied on one side of the wrap or on both sides of the wrap. If the camouflage pattern is applied to both sides of the wrap, a different camouflage pattern can be printed on each side of the wrap.

5 In certain embodiments, a camouflage wrap of the invention can be impregnated with silicone, one or more compounds that provide an anti-UV coating, one or more compounds that provide an infra-red detection deterrent coating, one or more compounds having an odor, one or more compounds that block odors, insect repellent, anti-fungal compounds, and/or anti-bacterial compounds.

10 In another aspect, the invention provides for methods of removably camouflaging an object. Such a method can include the step of applying a camouflage self-adherent wrap of the invention to the object. It is a feature of the invention that applying the wrap does not require pretreatment of the object, and removal of the wrap does not require use of a release agent. In an embodiment of the invention, the wrap can be removed from the object and can be reapplied to
15 the same object or to a different object.

Representative objects to which a wrap of the invention can be applied include a gun, a bow, a knife, a body part, a flashlight, a water bottle, a portion of a hunting blind or stand, boots, a backpack, a camera, and a vehicle.

20 In another aspect, the invention provides methods of making a camouflaged wrap. Such a method can include the steps of providing a self-adherent wrap and applying a camouflage pattern thereon. Applying the camouflage pattern can be performed by a manufacturer or by an end-user of the product.

25 Representative camouflage patterns include palmetto, treebark, hardwoods, hardwoods snow, timber, wetlands, mossy oak, forest floor, shadowgrass, fall foliage, breakup, mottled, and striped, and the camouflage pattern can be made from colors such as green, gray, brown, yellow, red, black, and white. Camouflage patterns also can be three-dimensional.

30 Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar or equivalent to those described herein can be used in the practice or testing of the present invention, suitable methods and materials are described below. In addition, the materials, methods, and examples are illustrative only and not

intended to be limiting. All publications, patent applications, patents, and other references mentioned herein are incorporated by reference in their entirety. In case of conflict, the present specification, including definitions, will control.

The details of one or more embodiments of the invention are set forth in the accompanying drawings and the description below. Other features, objects, and advantages of the invention will be apparent from the drawings and detailed description, and from the claims.

DESCRIPTION OF DRAWINGS

Figure 1 shows the ability of a self-adherent wrap of the invention to cover small details, such as trigger guards on firearms, while at the same time accommodating the functional portions (e.g., leaving the bolt uncovered).

DETAILED DESCRIPTION

Camouflage products are used routinely by the military, police, outdoor enthusiasts, hunters, and wildlife researchers and photographers. The present invention provides a camouflage self-adherent wrap that advantageously does not require a pretreatment to apply and does not require use of a release agent for removal. The present invention further provides methods of making and using a camouflage self-adherent wrap of the invention.

By definition, self-adherent wraps suitable for use in the invention do not adhere to the skin or to the substrate or object to which they are applied, and do not require the use of fasteners. A self-adherent wrap suitable for use in the invention cohesively bonds to itself with sufficient force to hold the contacting layers together against reasonably high shearing stresses. A self-adherent wrap suitable for use in the invention can be, without limitation, elastic, conformable, and/or porous.

Any wrap that is self-adherent is suitable for use in the invention. Commercially available examples of self-adherent wraps suitable for use in the present invention include woven wraps such as COBAN self-adherent wrap (3M, St. Paul, MN), CUTTER-WRAP self-adhesive bandage (Cutter Animal Health, Miles Laboratories, Inc., Shawnee KS), MEDI-RIP self-adherent bandage (Conco Medical Company, Bridgeport, CT), and SELF-GRIP sports/tape bandage (LMA, Ltd., South Norwalk, CT) and non-woven bandages such as ROFLEX cohesive flexible bandage (Smith and Nephew Rolyan Inc., Menomonee Falls, WI), VET-FLEX Veterinary flexible bandage (The Butler Company, Columbus, OH), CO-FLEX cohesive flexible bandage

(Andover Coated Products, Inc., Marblehead, MS), FLEXUS support wrap (Kimberly-Clark Corporation Animal Care Division, Roswell, GA), and EQUISPORT equine support bandage (3M, St. Paul, MN). Methods and materials for manufacturing a self-adhesive wrap suitable for use in the invention are known and described in for example, U.S. Patent Nos. 3,575,782; 4,005,709; 4,984,584; 5,939,339; and 6,616,387, herein incorporated by reference in their entirety.

A variety of different colors and patterns can be applied to a self-adherent wrap to produce a camouflage pattern. For example, and without limitation, greens, yellows, and reds can be used to produce a vegetation camouflage pattern; grays and browns can be used to produce a hardwood camouflage pattern; yellows and browns can be used to produce a wetland, marsh, corn and/or wheat crop, or natural grassland camouflage pattern; and browns, blacks, whites, and grays can be used to produce a desert or arid environment camouflage pattern. Camouflage patterns are often mixed. For example, when turkey hunting, a camouflage pattern appropriate for leaning against a tree can be worn from the waist up, while a camouflage pattern appropriate for sitting on a forest floor can be worn from the waist down.

Representative camouflage patterns are known and can include one or more of the following general patterns: palmetto, treebark, hardwoods, hardwoods snow, timber, wetlands, mossy oak, forest floor, shadowgrass, fall foliage, breakup, mottled, and striped. U.S. Patent Nos. D309,380; D324,312; D332,179; D366,154; D474,613; and D474,897 describe specific camouflage patterns, and are herein incorporated by reference in their entirety.

Camouflage patterns can be applied to either or both sides of a self-adherent wrap using methods known in the art. For example, camouflage patterns can be stamped, rolled, printed (e.g., screen printed), or sprayed onto a suitable self-adherent wrap. By way of example, early screenprinting of camouflage patterns used Anthrasol dyes, while more recent machine roller printing used Indanthren dyes. A camouflage pattern can be applied during or after the manufacturing process of the self-adherent wrap, or can be applied to the self-adherent wrap by, for example, the end-user, after the wrap is applied to the object (see, for example, U.S. Patent No. 4,837,056). Alternatively, the fibers used to make a self-adherent wrap can be dyed, and the camouflage pattern woven into the wrap during the manufacturing process (see, for example, U.S. Patent No. 6,589,297). Camouflage patterns also can be three-dimensional by using printing techniques (for example, RealTree's High Definition™ printing process), by creating

5 folds or layers in a material (see, for example, U.S. Patent No. 5,773,101), or by adding objects such as leaves and twigs to the surface of the wrap (see, for example, U.S. Patent No. 5,742,985). Methods for applying a camouflage pattern to a material are described in, for example, U.S. Patent Nos. 2,351,142; 2,364,289; 4,243,709; 4,095,940, and 6,589,297, which are herein incorporated by reference.

10 A camouflage self-adherent wrap of the invention can be used to removably camouflage an object. Without limitation, it is envisioned that a camouflage self-adherent wrap of the invention would be particularly useful to sportspersons and military personnel. A representative, although not comprehensive, list of objects that can be camouflaged with a camouflage self-adherent wrap of the invention include guns, bows, knives, flashlights, water bottles, portions of hunting blinds or stands, boots, backpacks or hip packs, cameras and tripods, and portions of a vehicle (e.g., automobiles or trucks, all-terrain vehicles (ATVs) and boats). Body parts, including hands, fingers, arms, the neck, and the face, also can be camouflaged using a camouflage self-adherent wrap of the invention. Significantly, a camouflage self-adherent wrap of the invention can be easily removed from an object, and if so desired, re-applied to the same or a different object.

20 A camouflage self-adherent wrap of the invention has numerous advantages over existing products. A significant advantage is that a camouflage self-adherent wrap of the invention does not adhere to the object to which it is applied. Another advantage is that the wrap can be applied to an object without pretreating the object. Still another advantage is that the wrap can be removed without using any release agent or without any residual adhesive remaining on the object. These advantages are significant because many of the objects for which camouflaging is desirable are valuable and expensive (e.g., guns, and bows), and to introduce chemicals for either or both application and removal, or for residual adhesive to remain on the object, can ruin or drastically reduce the value of such objects. Equally important are the advantages provided to the military in being able to quickly and easily change or remove camouflage covering during military operations.

25 Another advantage of a camouflage self-adherent wrap of the invention is that the flexibility and elasticity of the wrap allows wrapping of an object having essentially any size or shape, including objects that are traditionally difficult to camouflage (e.g., leather or rubber materials, or very small objects). This advantage is exemplified in Figure 1, which shows the

trigger guard of a gun wrapped with a self-adherent wrap suitable for use in the invention. Yet another advantage of a camouflage self-adherent wrap of the invention is the ability to readily change to wraps with different camouflage patterns. This allows rapid transition of a camouflage pattern when environments change or when the need for camouflage no longer exists (*e.g.*,
5 military personell entering a civilian environment). Changing a camouflage pattern can involve completely changing wraps, or removing a wrap and reapplying the same wrap such that a different pattern on the opposite side is exposed. As discussed above, application and removal of a wrap of the invention is simplified due to the fact that no pretreatment or release agent is required. As indicated herein, a further advantage is that the camouflage self-adherent wrap of
10 the invention can be reapplied (*i.e.*, reused) to the same or a different object.

In addition, a camouflage self-adherent wrap of the invention can advantageously protect the wrapped object from damage or from the elements. Wrapping an object with a camouflage self-adherent wrap of the invention also can reduce or eliminate noise created by the object or by an individual contacting or using the object. A camouflage self-adherent wrap of the invention
15 can be impregnated with a compound or composition for purposes of protection. For example, a camouflage self-adherent wrap of the invention can be impregnated with silicone to protect metal parts from rusting or with other compounds, for example, to provide an anti-UV coating or an infra-red detection deterrent coating. A camouflage self-adherent wrap of the invention also can be impregnated with a compound having a particular odor or scent (*e.g.*, doe urine, or doe estrus)
20 or a compound that blocks odors and scents (*e.g.*, activated charcoal). In addition, a camouflage self-adherent wrap of the invention can be impregnated with insect repellant; or with one or more anti-fungal or anti-bacterial compounds to fight infection. With respect to the latter example, a camouflage self-adherent wrap of the invention can be used for bandaging purposes, but a wrap of the invention provides camouflaging advantages over the present solid-colored self-adherent
25 bandages.

OTHER EMBODIMENTS

It is to be understood that while the invention has been described in conjunction with the
30 detailed description thereof, the foregoing description is intended to illustrate and not limit the

scope of the invention, which is defined by the scope of the appended claims. Other aspects, advantages, and modifications are within the scope of the following claims.